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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,429	09/26/2003	Robert O. Denipcy	17682A-003650US	1810

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EXAMINER
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AGRAWAL, RITESH

ART UNIT	PAPER NUMBER
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1631

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/672,429	<b>Applicant(s)</b> DEMPCY ET AL.	
	<b>Examiner</b> Ritesh Agrawal	<b>Art Unit</b> 1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 110-125 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 117 is/are objected to.
- 8) ☒ Claim(s) 110-125 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                       |                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                      | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____                                                |

**DETAILED ACTION****Objections**

Claim 117 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend directly or indirectly from another multiple dependent claim. Claim 117 depends indirectly from claim 114 which itself is a multiple dependent claim. See MPEP § 608.01(n). Accordingly, claim 117 has not been further treated on the merits.

Applicant is advised that if claims are amended or subsequently added in the reply to this requirement, applicant must include an identification of that group that is elected consonant with this requirement, and a listing of all claims readable thereon.

***Election/Restrictions***

This application contains claims directed to the following patentably distinct species:

Claims 110 or 111 are generic to the following disclosed patentably distinct species: A) PPA, B) PPG, C) PPPA, D) PPPG, E) PU, F) PC, G) HOPU, H) HOBuU, I) HOBuC, J) (NH<sub>2</sub>)<sub>2</sub>PPPA, K) (NH<sub>2</sub>)<sub>2</sub>PPPAOH, L) (NH<sub>2</sub>)<sub>2</sub>BuPPAOH, M) (NH<sub>2</sub>)<sub>2</sub>PPAI, and N) HOBuPPG. The species are independent or distinct because they represent highly divergent nucleotide modifications. There is no indication given that the listed nucleotide modifications are functionally equivalent. Since the different modifications may have different effects on overall stability and represent different chemistries, each represents a distinct invention. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed. Applicant is advised that a reply to

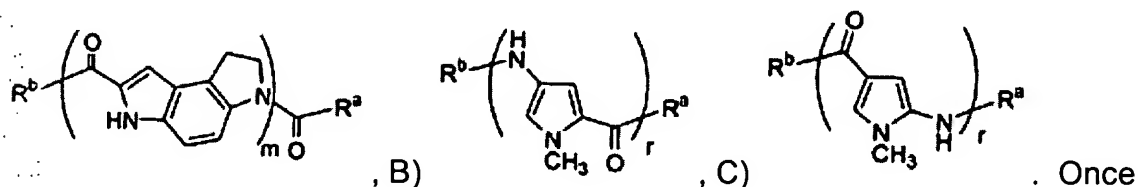
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this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species.

MPEP § 809.02(a).

Claim 120 is generic to the following disclosed patentably distinct species: A)



selected, applicant is advised of the need to further select a single  $R^a$  and  $R^b$  from the subspecies: A) H, B)  $OR^c$ , C)  $NR^cR^d$ , D)  $-CONR^cR^d$  and, if appropriate, a single  $R^c$  and  $R^d$

from the subspecies: A) H, B)  $(C_1-C_{12})\text{heteroalkyl}$ , C)  $(C_2-C_{12})\text{heteroalkenyl}$ , D)

$(C_2-C_{12})\text{heteroalkynyl}$ , E)  $(C_1-C_{12})\text{alkyl}$ , F)  $(C_2-C_{12})\text{alkenyl}$ , G)  $(C_2-C_{12})\text{alkynyl}$ , H)

$\text{aryl}(C_1-C_{12})\text{alkyl}$ , I)  $\text{aryl}$ . The species and subspecies are independent or distinct

because they represent different attached minor groove binding molecules. There is no evidence to suggest that the various possible minor groove binders encompassed by the claim have a consistent affect on the oligonucleotide structural integrity. Further,

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each represents a different chemical compound where, to understand the chemistry of the compound-DNA interactions, one must take into account different chemistries.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species.

MPEP § 809.02(a).

Claims 110 or 111 are generic to the following disclosed patentably distinct species: conditions for: A) hybridization, B) renaturation, C) mapping variations of base compositions, D) determination of sequence complexity. The species are independent or distinct because they represent highly different processes for which structural prediction may be required. The different methods detailed within claim 124 make use of different materials and reagents and require taking into account very different parameters. For example, methods A and B are carried out *in vitro* and require consideration of actual reagent concentrations whereas methods C and D would be carried out *in silico* and require consideration of theoretical substitution rates. Further,

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there is no information to suggest that these methods are linked. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Because these inventions are independent or distinct for the reasons given above and the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not

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distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ritesh Agrawal whose telephone number is (571) 272-2906. The examiner can normally be reached on 8:30 AM - 5:00 PM M-F.

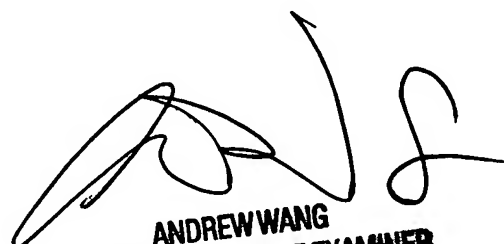
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on 571-272-0811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ritesh Agrawal

RA



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